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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,327	07/13/2005	Tadashi Minotani	44471/317873	8925

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JOHN S. PRATT, ESQ
KILPATRICK STOCKTON, LLP
1100 PEACHTREE STREET
SUITE 2800
ATLANTA, GA 30309

EXAMINER	
HSIEH, PING Y	

ART UNIT	PAPER NUMBER
2618	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/542,327	MINOTANI ET AL.	
	Examiner	Art Unit	
	PING Y. HSIEH	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18 and 22-29* is/are rejected.

7)☒ Claim(s) *19-21* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 July 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In view of the amendment filed 3/31/09, the objection to the specification is withdrawn.

2. In view of the amendment filed 3/31/09, the objection to claims 1-17 and 22-26 is withdrawn.

3. In view of the amendment filed 3/31/09, the rejection under U.S.C. 112 second paragraph for claim 18 is withdrawn.

Claim Objections

4. Claims 22 and 25 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

-Claims 1 and 27-29 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 and 36 of U.S. Patent No. 7,069,062 in view of Lee et al. U.S. PG-PUB No. 2002/0033729, hereinafter referred as Lee. Although the conflicting claims are not identical, they are not patentably distinct from each other because both disclose a communication apparatus that transmits and/or receives a signal via an electric field transmittable medium and said electric field transmittable medium **(a transceiver for inducing electric fields according to data to be transmitted in an electric field propagating medium, claim 1)**, a signal generation section generating a probe signal **(a transmission unit configured to modulate the data to be transmitted by generating alternating current signals having a prescribed frequency, and transmit modulated signals obtained by modulating the data to be transmitted, claim 1)**, an electrode inducing an electric field based on said probe signal in said electric field transmittable medium **(a transmission and reception electrode configured to induce the electric fields according to the data to be transmitted and receive the electric fields according to the data to be received, claim 2)**, a

resonance section that is connected between said signal generation section and said electrode **(the resonance causing unit being connected in series with the transmission unit and the transmission and reception electrode, claim 2)** and induces a series resonance by adjusting reactance against parasitic capacitance induced between said electric field transmittable medium, said communication apparatus, and an earth ground **(a resonance causing unit configured to cause a series resonance with a parasitic capacitance appearing between a ground for the transmission unit and an earth ground and a parasitic capacitance appearing between the electric field propagating medium and the earth ground, claim 1)**, an adjusting signal generation section outputting alternatingly a high level signal and a low level signal to said resonator section **(an adjustment signal generation unit configured to output an adjustment signal for periodically changing an amplitude of the electric signal outputted from the electric field detection unit, claim 36)**, an electric field detection section that receives an electric field in said electric field transmittable medium and generates an electric signal based on the received electric field **(an electric field detection unit configured to detect the electric the electric fields according to the data to be received, and convert each detected electric field into an electric signal, claim 2)**, a signal output section including and a voltage comparator comparing voltages to output a predetermined signal in accordance with the comparison result **(a differential amplifier configured to obtain a difference between the**

reference signal and an output signal of the amplifier, and amplify the difference, claim 3), and a control section that outputs a voltage having a constant voltage value to said resonator section and inputs said predetermined signal to output a voltage based on the inputted predetermined signal to said resonator section **(a control unit configured to output a control signal for controlling a characteristic of the resonance causing unit by using the electric signal converted by the electric field detection unit and a reference signal according to the modulated signal, claim 2)**. However, the conflict claims does not explicitly disclose the signal output section including a first electric charge storing means storing an electric charge in accordance with said electric signal while said adjusting signal generation section outputs a high level signal to said resonator section, a second electric charge storing means storing an electric charge in accordance with said electric signal while said adjusting signal generation section outputs a low level signal to said resonator section, and the voltage comparator is comparing a voltage across said first electric charge storing means and a voltage across said second electric charge storing means to output a predetermined signal in accordance with the comparison result, and the control section that outputs a voltage having a constant voltage value to said resonator section while either one of said first and said second electric charge storing means is storing an electric charge, and inputs said predetermined signal to output a voltage based on the inputted predetermined signal to said resonator

section while said first and second electric charge storing means stop storing an electric charge.

Lee discloses a capacitor C_{in} connected to one input of an amplifier as shown in fig. 2; the capacitor C_{in} charges in a first time interval, and applies the charged voltage to the amplifier in a second time interval as disclosed in paragraph 32.

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the signal output section to include capacitors connected to the inputs of the voltage comparator for storing electric charges in accordance with said electric signal while said adjusting signal generation section outputs a high/low level signal to said resonator section; and also the voltage comparator and control section can operate accordingly. One is motivated as such in order to reproduce the captured signals with great precision to insure that the information of interest can be reliably obtained.

-Claims 2-17 and 22-26 are rejected on the ground of nonstatutory obviousness-type double patenting as being dependent upon a rejected base claim, but would be withdrawn from the rejection if their base claims overcome the rejection by the timely filling of a terminal disclaimer.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Li (U.S. Patent No. 6,137,375).

-Regarding claim 18, Li discloses a signal processing circuit **(as shown in fig. 6A and 6B)** comprises a first connection means **(switch S_1, fig. 6A and 6B)**, one end of which is connected to a positive electrode of a voltage source outputting a predetermined voltage **(V_{dd}, as disclosed in fig. 6B)**, a second connection means **(switch S_2, fig. 6A and 6B)**, one end of which is connected to the other end of said first connection means **(as shown in fig. 6B)** and the other end of which is connected to a negative electrode of said voltage source **(ground as disclosed in fig. 6B)**, a first comparison means **(i.e. comparator 514, fig. 6A)** comparing a predetermined first threshold voltage and said predetermined signal to output a signal for turning on said first connection means when said predetermined signal **(i.e. V_{ENV})** is lower than said first threshold voltage **(i.e. V_{REF}) (when $V_{REF} > V_{ENV}$, the output U of comparator 514 goes high sending a signal to turn on switch S_1 as shown in fig. 6A and 6B and further disclosed in col. 9 lines 44-56)** a second comparison means **(i.e. comparator 518, fig. 6A)** comparing an input voltage and a second threshold voltage **(i.e.**

V_{ENV}) higher than said first threshold voltage **(i.e. V_{REF})** and said predetermined signal to output a signal for turning on said connection means when said predetermined signal is higher than said second threshold voltage **(when $V_{ENV} > V_{REF}$, the output D of comparator 518 goes high sending a signal to turn on switch S_1 as shown in fig. 6A and 6B and further disclosed in col. 9 lines 44-56)**, and a capacitor, one end of which is connected to said other end of said first connection means and the other end of which is connected to said negative electrode **(capacitor C_{INT} as shown in fig. 6A and 6B)**.

Allowable Subject Matter

8. Claims 19-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments filed 3/31/09 have been fully considered but they are not persuasive.

a. In pages 18-20 of the remarks, regarding claim 18, applicant argues that Li fails to disclose or suggest *a second comparison means that compares an input voltage and a second threshold voltage higher than the first threshold voltage*.

- The examiner respectfully disagrees. Li indeed discloses a second comparison means **(i.e. comparator 518, fig. 6A)** that compares an input

voltage and a second threshold voltage **(i.e. V_{ENV})** higher than the first threshold voltage **(i.e. V_{REF}) (when $V_{ENV} > V_{REF}$, the output D of comparator 518 goes high sending a signal to turn on switch S_1 as shown in fig. 6A and 6B and further disclosed in col. 9 lines 44-56)**.

b. In pages 25 and 26 of the remarks, regarding claims 1-17 and 22-29 based on Nonstatutory Obviousness-Type Double Patenting, applicant argues that Lee does not disclose or suggest a control section that outputs a voltage having a constant voltage to said resonator section while either one of said first and said second electric charge storing means is storing an electric charge.

- The examiner respectfully disagrees. The applicant should consider the combination of references as a whole. The combination of claims 1-3 and 36 of U.S. Patent No. 7,069,062 in view of Lee indeed discloses a control section that outputs a voltage having a constant voltage to said resonator section **(U.S. Patent No. 7,069,062, a control unit configured to output a control signal for controlling a characteristic of the resonance causing unit by using the electric signal converted by the electric field detection unit and a reference signal according to the modulated signal, claim 2)** while either one of said first and said second electric charge storing means is storing an electric charge **(Lee, C_{in} connected to one input of an amplifier as shown in fig. 2)**.

10. Applicant's arguments, see pages 20-25, filed 3/31/09, with respect to claims 1-3, 13-17 and 22-29 have been fully considered and are persuasive. The 103 rejection of claims 1-3, 13-17 and 22-29 has been withdrawn.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PING Y. HSIEH whose telephone number is (571)270-3011. The examiner can normally be reached on Monday-Thursday (alternate Fridays) 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lana N. Le can be reached on (571)272-7891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. Y. H./
Examiner, Art Unit 2618

/Lana N. Le/
Primary Examiner, Art Unit 2614